

US009638404B2

# (12) United States Patent

# (10) Patent No.: US 9,638,404 B2 (45) Date of Patent: May 2, 2017

# (54) PORTABLE FLASHLIGHT WITH WIRELESS SWITCHING FUNCTION

(71) Applicant: Sang Deuk Lee, Gwangju (KR)

(72) Inventor: Sang Deuk Lee, Gwangju (KR)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 14/776,064

(22) PCT Filed: May 1, 2013

(86) PCT No.: **PCT/KR2013/003772** 

§ 371 (c)(1),

(2) Date: Sep. 14, 2015

(87) PCT Pub. No.: **WO2014/142383** 

PCT Pub. Date: Sep. 18, 2014

# (65) Prior Publication Data

US 2016/0025317 A1 Jan. 28, 2016

# (30) Foreign Application Priority Data

Mar. 15, 2013 (KR) ...... 10-2013-0027651

(51) **Int. Cl.** 

**F21V 23/04** (2006.01)

**F21V 21/096** (2006.01)

(Continued)

(52) U.S. Cl.

CPC ....... *F21V 23/0435* (2013.01); *F21S 48/211* (2013.01); *F21V 21/0965* (2013.01);

2013.01), 1 217 2170703 (2013.01)

(Continued)

(58) Field of Classification Search

CPC ..... F21V 23/045

(Continued)

#### (56) References Cited

#### U.S. PATENT DOCUMENTS

2006/0171145 A1 8/2006 Ford et al.

(Continued)

#### FOREIGN PATENT DOCUMENTS

JP 62-33102 U 2/1987 KR 2000-0019679 A 4/2000 (Continued)

### OTHER PUBLICATIONS

International Search Report for PCT/KR2013/003772 dated Nov. 27, 2013.

Primary Examiner — Andrew Coughlin
Assistant Examiner — Keith Delahoussaye
(74) Attorney, Agent, or Firm — STIP Law Group, LLC

# (57) ABSTRACT

The present invention relates to a portable flashlight, and more particularly to a portable flashlight which has a wireless switching function for turning on or off the flashlight by means of a radio signal in addition to a manual switch provided on the outside of the flashlight. The flashlight can not only be turned on or off by means of an external radio signal, but also be used in various ways such as turning on a part of the lamp or intermittently turning on the flashlight. A flashlight according to the present invention includes a power supply part, a lamp for generating a light by means of the power from the power supply part, and a manual switch connected between the lamp and the power supply part for switching the flashlight, characterized by further including a radio switch in addition to or instead of the manual switch, wherein the radio switch consists of a radio receiver for receiving an external radio signal to operate the radio switch.

## 1 Claim, 7 Drawing Sheets

